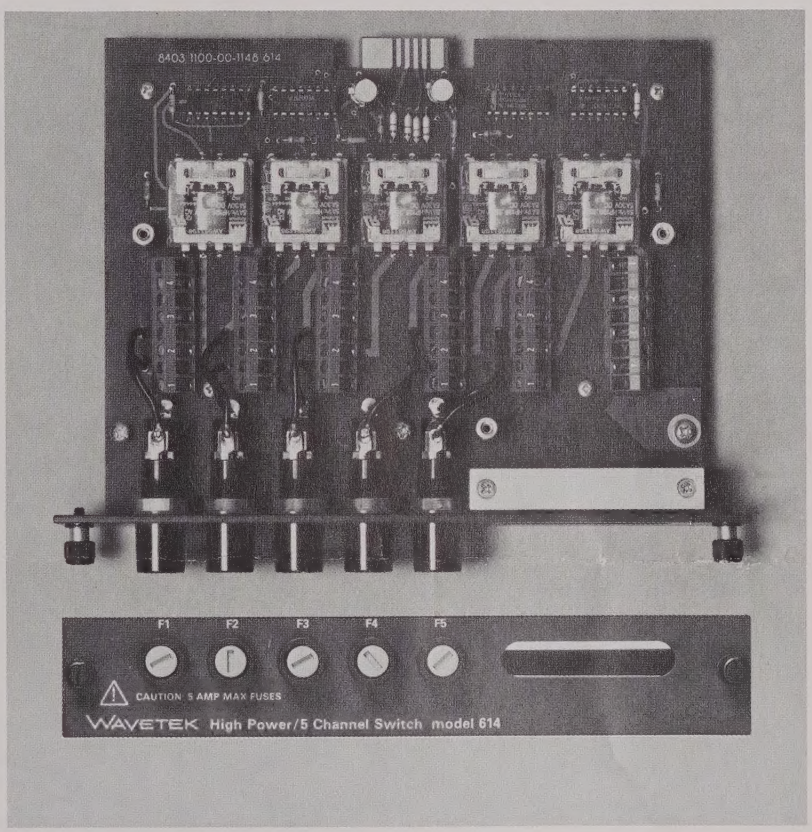
INSTRUCTION MANUAL
MODEL 614
HIGH POWER MODULE

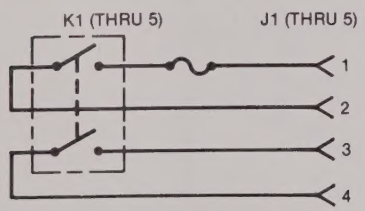
Model 614 is a module that switches high voltages and currents. It can be used to switch line voltages and power supplies. One side of the double pole relays is fused. The fuse holders are conveniently located on the outside of the module. Also, insulating covers (not shown in picture) shield top and bottom of module to protect user from external high voltage.



SPECIFICATIONS

Contact Rating
5A @ 30 Vdc,
3A @ 125 Vac,
2A @ 250 Vac.
Contact Resistance ≤0.07Ω per contact.
Switching Time ≤20 ms.
I/O Connections 20 screw terminals.
Standard Fuse 5A, fast blow.
Power Consumption
1.8 W max @ 12V;
0.36 W per switch.

SWITCH DIAGRAM



TYPICAL OF 5 CHANNELS

Specifications subject to change.

WAVETEK®
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9045 Balboa Ave., San Diego, CA 92123
P. O. Box 85265, San Diego, CA 92138
Tel 619/279-2200 TWX 910/335-2007
P11/83 S11/83

INSTALLATION AND USE

The Model 614 switch module can be installed into any available module slot within the 601 chassis or 602 expansion chassis. To install the module, refer to the installation figure and the following procedure.

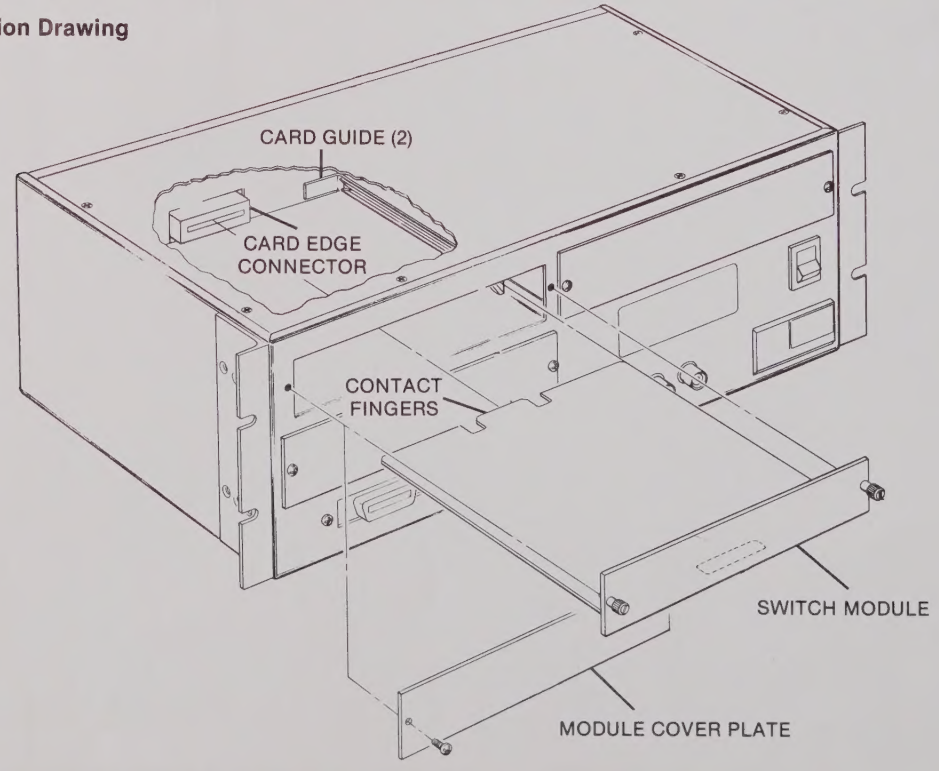
1. Turn the 601 power off.
2. Remove the two screws and the module cover plate.
3. Insert the switch module into the card guides (both sides) and push the module into the chassis. The contact fingers on the switch module printed circuit board must engage the card edge connector in the chassis.
4. Fasten the two captive screws on the switch module.

Once installed, the 614 module provides a 9-bit code that identifies the model number of the module and the number of relays in the module. This code along with the module's slot number is stored in the 601's memory during the power-up routine.

For specific programming information, refer to Section 3 of the Model 600 manual. See the switch diagram on page 1 for switch configuration and signal connections; notice that one side of each relay is fused. The fuses (5A fast blow) are accessible from the module faceplate. Signal connections are made using the internal screw terminals; use the following procedure to install the wires to the screw terminals.

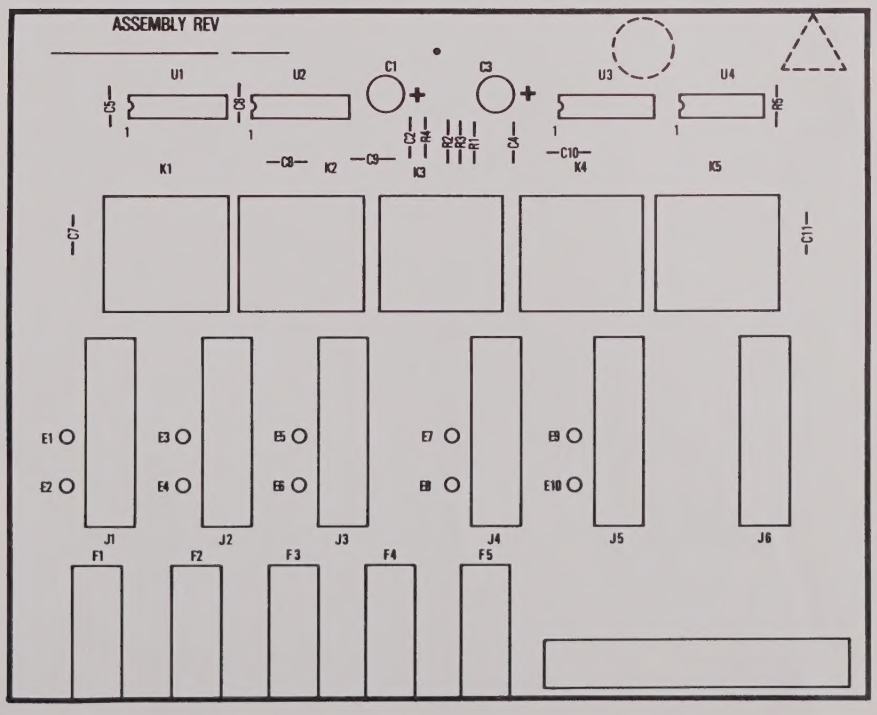
1. Remove the module from the chassis; power must be off.
2. Remove the top plastic cover (2 screws).
3. Remove the metal-foam cable clamp (2 screws).
4. Strip the end of the signal wires to approximately 6.3mm (¼ in.).
5. Route the wire through the opening in the module faceplate.
6. Connect the wires to the desired screw terminal. Then, tighten the screw.
7. Replace the metal-foam cable clamp (2 screws) after all wires are installed and secure.
8. Install the top plastic cover (2 screws).
9. Install the module in the chassis.

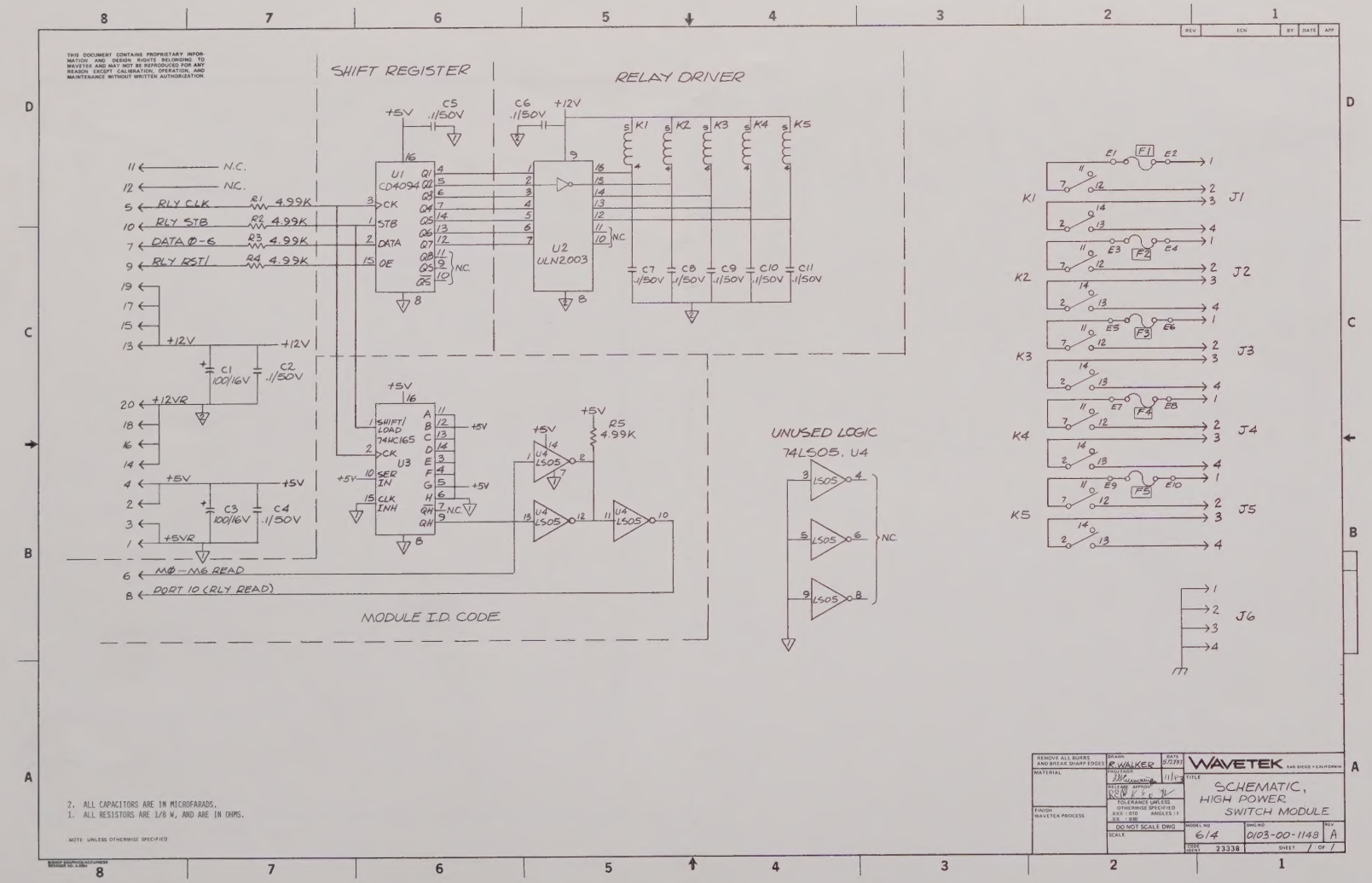
Installation Drawing



REFERENCE DESIGNATORS	PART DESCRIPTION	ORIG-MFGR-PART-NO	MFGR	WAVETEK NO.	QTY/PT
1	FACE PLATE, MODULE REF: 3200-06-0035	1400-01-6690	WVTK	1400-01-6690	1
6	SHIELD, BOTTOM COVER	1400-01-6700	WVTK	1400-01-6700	1
7	SHIELD, TOP COVER	1400-01-6710	WVTK	1400-01-6710	1
3	CLAMP, BAR, LOWER	1400-01-6883	WVTK	1400-01-6883	1
4	CLAMP, BAR, UPPER	1400-01-6893	WVTK	1400-01-6893	1
5	HOLDER, WIRE, FOAM	1400-01-7000	WVTK	1400-01-7000	2
C10 C11 C2 C4 C5 C6 C7 C8 C9	CAP, CER, MON, .1MF, 50V	CAC03Z5U104Z050A	CORNG	1500-01-0405	9
C1 C3	CAP, ELECT, 100MF, 25V RADIAL LEAD, SP .20	CRE SERIES 100/25	CAPAR	1500-31-0102	2
10	HIGH POWER SWITCH MODULE BOARD	1700-00-1148	WVTK	1700-00-1148	1
J1 J2 J3 J4 J5 J6	TERMINAL STRIP 4 PIN PC MOUNT	25.137.0453	ELECT	2100-09-0016	6
8	FUSE HOLD	031.1653/031.1666	SCHUR	2400-05-0012	5
F1 F2 F3 F4 F5	FUSE, 5A, FAST	MTH-5	BUSS	2400-05-0036	5
K1 K2 K3 K4 K5	RELAY, HIGH POWER 250V, 5A	NC2D-JP-12V	AROMT	4500-00-0022	5
R1 R2 R3 R4 R5	RES, MF, 1/8W, 1%, 4.99K	RN55D-4991F	TRW	4701-03-4991	5
U2	IC	ULN2003A	SPRAG	7000-20-0300	1
U1	IC	CD4094BE	RCA	8000-40-9400	1
U4	IC	74LS05	TI	8000-74-0510	1
U3	IC, SHIFT REGISTER	74HC165	MOT	8007-41-6540	1

WAVETEK PARTS LIST	TITLE PCA, HIGH POWER SWITCH MODULE	ASSEMBLY NO. 1100-00-1148 PAGE: 3	REV A

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SHIFT REGISTER
RELAY DRIVER
MODULE I.D. CODE
UNUSED LOGIC
74LS05, U4
N.C.
RLY CLK
RLY STB
DATA Ø-6
RLY RST/
M0-M6 READ
PORT 10 (RLY READ)
U1 CD4094
U2 ULN2003
U3 74HC165
U4 LS05
+5V
+12V
+12VR
4.99K
.1/50V
100/16V
K1
K2
K3
K4
K5
J1
J2
J3
J4
J5
J6
2. ALL CAPACITORS ARE IN MICROFARADS.
1. ALL RESISTORS ARE 1/8 W, AND ARE IN OHMS.
NOTE UNLESS OTHERWISE SPECIFIED
REMOVE ALL BURRS AND BREAK SHARP EDGES
MATERIAL
FINISH WAVETEK PROCESS
DRAWN R. WALKER
DATE 8/27/71
TITLE
SCHEMATIC, HIGH POWER SWITCH MODULE
TOLERANCE UNLESS OTHERWISE SPECIFIED XXX ± .010 ANGLES ± 1 XX ± .020
DO NOT SCALE DWG
SCALE
WAVETEK SAN DIEGO, CALIFORNIA
MODEL NO 614
DWG NO 0103-00-1148
REV A
CODE IDENT 23338
SHEET 1 OF 1

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